

Figure 1

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Submission no : 1  

exon 1 : <..672  

start codon : 381..383  

intron 1 : 673.  

Remarks : no consensus splice site intron 1

tttttttacg ttcttctttt tttcgagtgg tgactggatg ctgattcttc 50
ctcgatattt tgctgcttct ctctccctcc cctccttccc gggcccgggc 100
ccgccccgca ccctccttcc gcccccttctt ctccggggtc agccaggaag 150
atgtcccggag ctgctatccc cggctcgccg cgggcagccg cttctgagc 200
ccccgaccccg agcggccgagc cggccgcgca tggtctgggc cgtggagcgt 250
ctccgcagtc gtagctccag ccggccgcgt cccagccccc gcaggctctag 300
catcagcggc ggcggccggc gcggccggcgt ctccgcata gttcggccgca 350
gcgttaaccgg agcccccttgc tctttgcaga ATGGCCCGCT TCGGAGACGA 400
GATGCCGGCC CGCTACGGGG GAGGAGGCTC CGGGGCAGCC GCCGGGGTGG 450
TCGTGGGCAG CGGAGGCAGGG CGAGGAGCCG GGGGCAGCCG GCAGGGCGGG 500
CAGCCCAGGG CGCAAAGGAT GTACAAGCAG TCAATGGCCG AGAGAGCGCG 550
GACCATGGCA CTCTACAACC CCATCCCCGT CCGACAGAAC TGCCTCACGG 600
TTAACCGGTC TCTCTTCCTC TTCAGCGAAG ACAACGTGGT GAGAAAATAC 650
GCCAAAAGAT CACCGAATGG CCatatccctt ttgccccgaac cccagcaqca 700
gctgcgcctc cccctccctcc ctccgcctcc cctcttccag gctgggagag 750
agacccgggg gttgatggga ggtggggagg aggggggtct tccaggggct 800
gggagagggg gcacccggag gagtgtgaaa gaatctctcc accccgagct 850
gggtttagct accctggagg ctgggaatg ggttttcgg gggctggggg 900
ccggccagcc ggagagtgga tccttcccaa ggaccgactc tagaatgaga 950
tct 953

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Submission no : 2
Intron 1 : <..88
Exon 2 : 89..194
Intron 2 : 195..>
Remarks : No consensus splice site intron 1

gatcttcc	actgggtca	gtgggggtgg	gtgcacccctcc	aacacccttc	50
ttttcttga	acaagatttt	tccttaattc	cccaataacTC	CCTTTGAATA	100
TATGATTTA	GCCACCATCA	TAGCGAATTG	CATCGTCCTC	GCACCTGGAGC	150
AGCATCTGCC	TGATGATGAC	AAGACCCCGA	TGTCTGAACG	GCTGgtgagt	200
gatgtctttt	ctcagggtct	tctccttggc	tttagcagga	cattaatttt	250
tgggggagtg	gagcaaggcga	cagaggaggc	tctcagtccct	ggagccccaga	300
gccagatcat	gggaagccta	aatttccctt	tcattttttc	ttgaaccaga	350
gtctcgctct	gtcaccagg	ctggagtgca	gtggttcagt	catagctcac	400
tgcagcctcc	acctcctggg	ctcaagccat	cctcccactg	cagccctctg	450
atgtacggg	actaacaggt	gccaccatgc	ccagttaatt	ttcttatttt	500
tatctttttt	tgtaagaaga	tggggat			527

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Submission no : 3
Intron 2 : <..57
Exon 3 : 58..197
Intron 3 : 198..>

gatcttgc	acatctgccc	agcccaagac	gctgaccc	ccttctctcc	50
cttccagGAT	GACACAGAAC	CATACTTCAT	TGGAATTTT	TGTTTCGAGG	100
CTGGAATTAA	AATCATTGCC	CTTGGGTTTG	CCTTCCACAA	AGGCTCCTAC	150
TTGAGGAATG	GCTGGAATGT	CATGGACTTT	GTGGTGGTGC	TAACGGGgtA	200
agtggcgcgt	gctatacgct	ttggatttaa	ctagctgaag	gattacgagg	250
cttttgggtt	gtgtggtccg	ggccaggctc	aggaaggctg	agcccttgc	300
ttctccctcc	ccttggat	cgcctgcctc	ctttctgc	acacccacc	350
tccatgtctc	agctgtat	tacagcagat	gc	acaattaaaa	400
taatagctca	ttattgttgg	ctgcttccag	agtgc	tttat	441

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Submission no : 4
Intron 3 : <..142
Exon 4 : 143..234
Intron 5 : 235..>

aaaactgagg ccagtggtgt cgagtcacct gcctgtggtc acccaaccaa	50
tacaggacag cttggaatcc caagcacccc cgccctgctg tctgacccccc	100
aaaacccacc ctctgttctc cattctggct tcttttttc agCATCTTGG	150
CGACAGTTGG GACGGAGTT GACCTACGGA CGCTGAGGGC AGTCGAGTG	200
CTGCGGCCGC TCAAGCTGGT GTCTGGAAATC CCAAgtgcgt gagttccga	250
ccctgacaa	259

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Submission no : 5
Intron 4 : <..118
Exon 5 : 119..271
Intron 5 : 272..>

cttaatattc	cctcaggaac	acacacctgctt	tgtctgggag	agacctgggc	50
gtcttggtgg	cggggtttg	ggggtaacttg	ctcatggcct	tatggggcct	100
ctctctgtgt	ccccccagGT	TTACAAGTCG	TCCTGAAGTC	GATCATGAAG	150
GCGATGATCC	CTTTGCTGCA	GATCGGCCTC	CTCCTATTTC	TTGCAATCCT	200
TATTTTGCA	ATCATAGGGT	TAGAATTTA	TATGGGAAAA	TTTCATACCA	250
CCTGCTTGCA	AGAGGGGACA	Gttaggtcca	cgagcatga	tgcacatttc	300
cagttttctc	cttcagggac	aagctttgg	gaggattagg	cagggtgtg	350
cttctttctc	ctggcagctg	ggaggaccgt	ctccttcaga	gagcactac	399

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Submission no : 6
Intron 5 : <..22
Exon 6 : 23..216
Intron 6 : 217..>

ttttttccct	tccctttgt	agATGACATT	CAGGGTGAGT	CTCCGGCTCC	50
ATGTGGGACA	GAAGAGCCCG	CCCGCACCTG	CCCCAATGGG	ACCAAATGTC	100
AGCCCTACTG	GGAAGGGCCC	AACAACGGGA	TCACTCAGTT	CGACAAACATC	150
CTGTTTGCAG	TGCTGACTGT	TTTCCAGTGC	ATAACCATGG	AAGGGTGGAC	200
TGATCTCCTC	TACAATgtaa	gtgatgctgg	gacagtgtgt	gtggacaatc	250
agagtctcag	ggaggtggcc	tcctgggacc	agtgagactc	caaggctgca	300
atggagggac	cctgagctgg	gaaaaggcagc	ccaaggacaa	cacagccccca	350
ctgaagctgg	cctgaggcgc	aggctttga	agattacagg	ggctcatgag	400
cagaactcta	actatagggc	atagaagtct	ggagggcccc	cagatgcaac	450
atcattttc	attgtgcaag	tgtttagata	taatttaga	tttttgaata	500
cgaaaaggtt	atgtgatcca	aaatccaaca	cagataaaag	atagagtaat	550
atcttggac	gtaggcgagg	ggtccctgcc	ctgagg		586

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Submission no : 7
Intron 6 : <..183
Exon 7 : 184..287
Intron 7 : 288..>

tttcttcaga aaacggttcc ttccctccatt tccccctctg ggatgccaga	50
gccccagaac tccacaagcc aagaacattt aagacagagc cacaagagaa	100
ccgagcttcc cttccctca cctgtcaggt tctatctgag tcccaagtcaa	150
ctctcacctg cttccctcc tcacacccta cagAGCAACG ATGCCCTCAGG	200
GAACACTTGG AACTGGTTGT ACTTCATCCC CCTCATCATC ATCGGCTCCT	250
TTTTTATGCT GAACCTTGTG CTGGGTGTGC TGTCAGGgta agtttctgct	300
actccccacc ccatcccact cactcctctt tgctaacttc tttccaagta	350
gaggccattg aagctttgtt ttcattcact agacaga	387

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Submission no : 8
Intron 7 : <..190
Exon 8 : 191..306
Intron 8 : 307..>
Sequence : 412
Remark : intron 7 contains CA-repeat (D19S1150)

cccaagtcttt	tcccagaagt	cctgactcct	cctgttgaaa	actcctgacc	50
tccagggact	tctgaatccc	caaacacaca	cacacacaaa	cacacacaca	100
cacacacaca	cacacacaca	caaacacaca	cacaaacgtt	tcctaacatt	150
tt.aaaacag	ccataactctg	gcttttctat	gcttctccag	GGAGTTTGCC	200
AAAGAAAGGG	AACGGGTGGA	GAACCGGCAG	GCTTTCTGA	AGCTGAGGCG	250
GCAACAACAG	ATTGAACGTG	AGCTCAATGG	GTACATGGAA	TGGATCTCAA	300
AAGCAGgtga	ggccctttca	tcctggggcc	cagggatgga	gatcccaggc	350
cacagagtac	aaagagagtc	atgcagtttgc	gagaaggcta	agctgggagg	400
gttatgatgg	ga				412

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Submission no : 9
Intron 8 : <..513
Exon 9 : 514..570
Intron 9 : 571..>

gagtaggaag	ttagagggcag	ggtggtcagg	gaaggcttct	ctaaaggaagt	50
accctctgag	cagagagacc	tgaaggacgt	gaagaaggaa	gctgtgggga	100
tgtcaaggga	aggggcattc	cagggcagaga	cagcaagtgc	aaaggccctg	150
agcttaggaac	gtatttgaga	cacagcaagg	aagccagtgc	agctgaaaca	200
gagttagagg	tggggacagc	tggaggagag	gaagacagga	aggtgatgga	250
gatcagatca	agcaggggct	tataggctgt	ggtgtggaca	ttgggtttta	300
ttttgcgcga	ggtggggaga	atgttggcta	ttgtctactgt	tgcggaggtg	350
gggcatttgaag	tcacaaacca	cccagcagca	tgtttttgg	tcgggtgagc	400
tgtcaccatc	agtcaagcaga	gaatgggggt	ggccgggcag	acccttcttc	450
ctgggtccaaag	ggagaactca	tcctccaaat	gcaggagctt	aactctgtgc	500
tcttcctctt	cagAAGAGGT	GATCCTCGCC	GAGGATGAAA	CTGACGGGGA	550
GCAGAGGCAT	CCCTTTGATG	gtaactgctc	taaaccacc	tcaggggtgg	600
gtcccagggg	a				611

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Submission no : 10
Intron 9 : <..86
Exon 10 : 87..179
Intron 10 : 179..>

ttaatccaag acacactgtg tgcctatat ggtctgtgtt cgaaaaaggg	50
taacgtctt ttctcttgc atgtttccat tgtagGAGC TCTGCAGGAGA	100
ACCACCATAA AGAAAAGCAA GACAGATTTG CTCAACCCCG AAGAGGCTGA	150
GGATCAGCTG GCTGATATAG CCTCTGTGGg tgagtccctt cctctgccac	200
ctatcagttt ttcatcacct atcgcccaag agacatggtg gggggggg	250
agagggcttg caaacccgtgc tgcctggatt tgggtctcaag ctccaccctt	300
tcccacctgt gcgtgtgtcc tgggcagatt acatcattat gggaaataaca	350
tccgtgccta gcttctcatt attttgggg aattcaacta aatgatcccc	400
atgaagcattt gcaaaaccaggc acctggcagg gacgaagctc ccagtcaagt	450
tggtaatgt ttgtgactca ttggggaaat atcatgggg acctgcttat	500
attagggtct tggttgcaaa caaacaaggc agtcacgagg ctgagctggg	550
agatcactt gaggctggga agtggaggct gcaataagcc attattgtgt	600
tactgcactt cagcctggca cagaaaaaaaaaaaaaaanac aaactgagcc	650
agcaca	656

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Submission no : 11
Intron 10 : <..450
Exon 11 : 451..660
Intron 11 : 661..>

gatcacttct aaagttaaat	gtccatggga	aaacagtctc	atccacatct	50
ctttctggag	gccttccaag	cgtgctccat	gcagctctgt	100
tgcacatcagg	aatggaggct	ctgctttatc	ctgcccgtgt	150
cagaggcatc	agatgtggct	gggagtgggaa	gacatggaaa	200
gcaacagaga	actatcagcc	ttcccatcaa	ttggttactt	250
tattttcag	gggcactgtc	ttctcataag	ctccatctat	300
gcccattgggt	catgatgggt	ccctcaggcc	agaggcttgc	350
aatggatccc	ctggctaaaa	tctgtgcttg	ggctgcacat	400
cttctgaagg	aacagcctga	gcctgacatt	ctccatcttt	450
GTTCTCCCTT	CGCCCGAGCC	AGCATTAAA	GTGCCAAGCT	500
ACCTTTTTTC	ACAAAAAGGA	GAGGAGGATG	CGTTTCTACA	550
GGTCAAAACT	CAGGCCCTCT	ACTGGACTGT	ACTCAGTTG	600
ACACGCTGTG	TGTTGCTATT	GTTCACTACA	ACCAAGCCCGA	650
GACTTCCTTT	gtgagtatca	cccagccsa	ccctgtccaa	700
cctccctcac	acccttttc	cacttcttt	tctctggtag	750
ttctttggtc	ctcattgaat	ctgcccctt		778

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Submission no : 12
Intron 11 : <..323
Exon 12 : 324..436
Intron 12 : 437..>

gatcacttgt	ggccaggagt	tcaagancag	ccagggcaac	atagtgagga	50
cccccatctc	cacattaaaa	attttaaaaa	gaaaaaaagat	aagtcatagaag	100
ttgggtgtgg	tgacacatgc	ctgtagttct	agcatgttgg	aggccaaatc	150
aggaaaactg	tttgaggcca	ggagtttcaa	accagcctaa	cagcatagca	200
agacctcatc	tctacaaaaa	ataaaaatgtt	taaaaatgtat	aataaaagga	250
aagtcatagc	caccttggAAC	cccttaccctc	agcaaggccta	accttcccttc	300
tgtttcctcc	ttctcccttc	tagACTATGC	AGAATTTCATT	TTCTTAGGAC	350
TCTTTATGTC	CGAAATGTTT	ATAAAAATGT	ACGGGCTTGG	GACGCGGCCT	400
TACTTCCACT	CTTCCTTCAA	CTGCTTGAC	TGTGGGgtaa	gtgctttgt	450
ttctaagagt	tcatttctcc	agcttgcctc	tggaatgaca	gataacctgga	500
cacattaaag	ggagaaaagg	aaagtcaccc	ctgaatatga	gagactcaga	550
tggatgcaga	aggaatgaga	aaacaatcca	aacactggca	aggatacagt	600
gtacccagaa	ccctcaacca	ccgcca			626

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Submission no : 13
Intron 12 : <..545
Exon 13 : 546..658
Intron 13 : 659..821
Exon 14 : 822..953
Intron 14 : 954..>

gatcngncat	gcacaccagc	ctgggtgata	agagcaagac	ccctctcaaa	50
ataaatgaat	aaataaaaat	aaataaataa	ataagaggcc	gggtgcagtg	100
gctcaatgct	ttggaaaagt	gaggccaaca	gttggagaga	ccaaagcagg	150
aggatggctt	cagcccaagaa	gtttgaggcc	mgcctggca	atactagcga	200
gacactatct	ctataaaaat	gttttaaaat	tagccagatg	tggggggca	250
cacctgtaat	cccagctact	caagaggctg	agggtgggagg	atcaacttaag	300
cccaggagga	cagtgcgtca	gtgagctatg	attgcgccta	ctgcactcca	350
gcctgggtga	cacagtgaga	cccggtctct	atagataaat	gaatggatga	400
atqaggggggt	caaggatcct	caccggctt	ccatttggag	ggaggagtt	450
ggttgagttc	ttgcaaggtt	ggtagctagg	aatgcttgc	cagttctgga	500
gccccagacac	tgtccctgga	catgagacca	ggttctctgc	cctagGTTAT	550
CATTGGGAGC	ATCTTCGAGG	TCATCTGGGC	TGTCATAAAA	CCTGGCACAT	600
CCTTGGAAT	CAGCGTGT	CGAGCCCTCA	GGTTATTGCG	TATTTTCAAA	650
GTCACAAAGt	aagtcttgg	ggttcttgg	catttgcata	gggggtgggg	700
atgggggaca	tggggggcc	gcctccagaa	agttggaaa	gtgagcctcg	750
tgtttcgagg	gctgactccg	ggccctgcct	wccccgcctg	gcctgagttc	800
tcgcctggsc	tctgtcggca	gGTACTGGGC	ATCTCTCAGA	AACCTGGTCG	850
TCTCTCTCCT	CAACTCCATG	AAGTCCATCA	TCAGCCTGTT	GTTTCTCCTT	900
TTCCCTGTTCA	TTGTCGTCTT	CGCCCTTTG	GGAATGCAAC	TCTTCGGCGG	950
CCAgtaagtc	ttcacagga	attcaa			976

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Submission no : 14
Intron 14 : <..201
Exon 15 : 202..274
Intron 15 : 274..>

ccctccacgt	gcaggctgcc	tccctcgtag	cccagacacc	catttgcgg	50
cacccaaatg	ggcaggggcc	tgggtaccac	tcaggggttc	ctggggacag	100
agatgatgga	aacgttcgtt	tccttggaga	tgagatactg	agccacaccc	150
tcagagcacc	ccgggtgggg	ccaacgtgaa	atgtctgtgt	cctccctgca	200
gGTTTAATT	CGATGAAAGGG	ACTCCTCCCA	CCAACTTCGA	TACTTTCCA	250
GCAGCAATAA	TGACGGTGTT	TCAAGtacag	cctccacctg	gccccacggg	300
ccaacacactc	tcagtgtcac	agatgaaagt	gcctgtcca	catccaaggg	350
gcttcctga	actccctcctt	ctctacctgg	ccttttaca	ccactttgaa	400
acacagattt	tatggttata	attattcaat	tatggtgagg	ccaacagatc	450
aggagatgaa	tgtcattggaa	aagatagttt	gtggctgggc	acgggtggctc	500
acacccataa	tcccagcact	ttggccaggt	acgggtggctc	acacctgtaa	550
tcccaacgct	ttgggaagcc	caggtggcgg	atcacttga	gatcaggaat	600
tcgagaccag	cttggccaan	atggtggaaac	cccatctcta	ctaaaaatac	650
aaaaatttagc	cgggcggtgg	agcacatgcc	tgtatccca	gtactcggg	700
agatgaggca	caagaattgc	ttgaacctgg	gaggcagagg	ttgcagtgag	750
ccaagatcgc	gscactgcac	tcmagcctgg	gcaacagagt	gagactccat	800
ctcaaaaaag	caaaagaaaa	aaaaaaccac	tttgggaggt	caagatggga	850
ggactactt	aggccaggag	tttggagacaa	gtctggcaa	catagtgaga	900
ctccgtctct	gcaaaaaat	wataataata	attagctggg	catggtgata	950
catacctcct	agctacttagg	gcaagctgaag	tggaggatt	gtttaagccc	1000
aggaggttga	ggctgcagta	agctacaatc	acaccactat	actccagcct	1050
gggcgagaga	gcaaaagccct	gtctcaaaaa	cgaaaaagaaa	gtttgttata	1100
ctcacagatc					1110

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Submission no : 15
Intron 15 : <..524
Exon 16 : 525..642
Intron 16 : 643..795
Exon 17 : 796..863
Intron 17 : 864.>
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gatcctccca	ccttggcctc	ccaaagtgt	gggattacag	gcatgagcca	50
tggcatgcgg	tcttcttctg	ttcttataag	ggcactaata	ccatcatgaa	100
gtcccccatg	acctcatcta	acccttagtt	cctcttaaag	gccccatctc	150
caaataccat	cccacatag	gttagggctt	caactcatga	atttggagggc	200
gggcacaatt	tagtccataa	caaataccct	taatcacatc	aagtaagaca	250
gagttacagg	agggtctgt	actcctccag	ggtcccattt	tccttagaagc	300
caggctaaga	gccccacgac	gcagggAACGG	ccctttctac	tcgcaaaca	350
agagaaaagc	caaggagaag	ccaaacacgga	gtctggctct	gcaaaaccggg	400
caggattgtt	aaagacctcc	tgggtctgggg	gatgggggtgg	gcggattccg	450
gtccacacgc	tgcatctcca	aggggccctgt	ggctgagagg	ggggttggct	500
gtgtgtttct	tcctccctt	tcagATCCTG	ACGGGGCGAAG	ACTGGAACCGA	550
GGTCATGTAC	GACGGGATCA	AGTCTCAGGG	GGGCCTGCAG	GGCGGCATGG	600
TGTTCTCCAT	CTATTTCAT	GTACTGACGC	TCTTTGGGAA	CTgtatcctt	650
catggagaga	gagaagggga	caggcctgga	cctctggcag	aggagaggtt	700
gcaggggctc	aagggggggt	actgagagac	ccagatacc	agggcccaag	750
tggtgtccca	ccagtgggt	cttttctga	ctcagacatt	tgcagACACC	800
CTCCTGAATG	TGTTCTGGC	CATCGCTGTG	GACAATCTGG	CCAAACGCCCA	850
GGAGCTCACC	AAGgtggagg	cggtgggaga	atgtttctct	ggcaaagtt	900
ccacctgccc	atggcagatc	aagcactttt	ttggattaac	tgagccacag	950
gaaataacat	tttcaaata	atkaaaaaga	tc		982

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Submission no : 16
Intron 17 : <..119
Exon 18 : 120..226
Intron 18 : 227..>

ccttggttct	gattggtcga	aatatttcaa	atgttgc	cccc	tggtcagcaa	50
cagggtcaga	agtgagtccc	caaggcctag	ttc	atgtttt	gtgaacaaag	100
attccacgtg	cctttcagG	ACGAGCAAGA	GGAAGAAGAA	GCAGCGAAC	150	
AGAAACTTGC	CCTACAGAAA	GCCAAGGAGG	TGGCAGAAGT	GAGTCCTCTG	200	
TCCGCGGCCA	ACATGTCTAT	AGCTGTgtaa	gtccccta	at ccctggatg	250	
cta-cctggc	tcctgaacgt	gtccgaccac	tatccaggca	cagatttggg	300	
aagcagtggg	ggtg				314	

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Submission no : 17
Intron 18 : <..209
Exon 19 : 210..1019
Intron 19 : 1020..>
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gcccttagcc	agggtggagc	catggaggg	tctttagcag	aggaggctgg	50
gacctgactc	agatgctcac	agactcctag	cattcaggtg	gggagtagag	100
ggggagagc	aggatggga	ggctgagatg	tggttgggt	cgcctgggtc	150
atccatcaa	gctacatgc	ctagcaatgc	tctaaactcc	tgtgaccatg	200
ccactgcagG	AAAGAGCAAC	AGAAGAAATCA	AAAGCCAGCC	AAAGTCCTGT	250
GGGAGCAGCG	GACCAGTGAG	ATGCAGAAC	AGAACTTGCT	GGCCAGCCGG	300
GAGGCCCTGT	ATAACGAAAT	GGACCCGGAC	GAGCGCTGGA	AGGCTGCCTA	350
CACGCCGCAC	CTGCGGCCAG	ACATGAAGAC	GCACCTGGAC	CGGCCGCTGG	400
TGGTGGACCC	GCAGGAGAAC	CGCAACAACA	ACACCAACAA	GAGCCGGCG	450
GCCGAGCCA	CCGTGGACCA	GCGCCTCGGC	CAGCAGCGCG	CCGAGGACTT	500
CCTCAGGAAA	CAGGCCCGCT	ACCACGATCG	GGCCCGGGAC	CCCAGCGGCT	550
CGGGGGGCCT	GGACGCACGG	AGGCCCTGGG	CGGGAAGCCA	GGAGGCCGAG	600
CTGAGCCGGG	AGGACCCCTA	CGGCCGCGAG	TCGGACCACC	ACGCCCGGGA	650
GGGCAGCCTG	GAGCAACCCG	GGTTCTGGGA	GGCGAGGCC	GAGCGAGGCA	700
AGGCCGGGGA	CCCCCACCGG	AGGCACGTGC	ACCGGCAGGG	GGGCAGCAGG	750
GAGAGCCGCA	GCGGGTCCCC	GCGCACGGGC	GCGGACGGGG	AGCATCGACG	800
TCATCGCGCG	CACCGCAGGC	CCGGGGAGGA	GGGTCCGGAG	GACAAGGCAG	850
AGCGGAGGGC	GCGGCACCGC	GAGGGCAGCC	GGCCGGCCCC	GGGGGGCGAG	900
GGCGAGGGCG	AGGGTCCCGA	CGGGGGCGAG	CGCAGGAGAA	GGCACCGGCA	950
TGGCGCTCCA	GCCACGTACG	AGGGGGACGC	GCGGAGGGAG	GACAAGGAGC	1000
GGAGGCATCG	GAGGAGGAAg	taagtggagg	tgaccccgaa	tccgcagaat	1050
gacggtaaca	ttaataatac	aacagccaaa	gtagcacgtg	ctgtgtattt	1100
gttataaaat	ata				1113

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Submission no : 18
Intron 19 : <..67
Exon 20 : 68..531
Intron 20 : 532..>

gtcctgaaac	tttgcctttt	aatcctaaat	cattgtgggt	tctttttcat	50	
tcacttgcct	tcctca	AGA	GAACCA	GGGG	CTGTGTC	100
CCCCAACCTG	TCAACCACCC	GGCCAATCCA	GCAGGAC	CTG	GGCGCAAG	150
ACCCACCCCT	GGCAGAGGAT	ATTGACAACA	TGAAGAACAA	CAAGCT	GGCC	200
ACCGCGGAGT	CGGCCGCTCC	CCACGGCAGC	CTTGGCCACG	CCGGC	CTGCC	250
CCAGAGCCA	GCCAAGATGG	GAAACAGCAC	CGACCCGGC	CCC	ATGCTGG	300
CCATCCCTGC	CATGGCCACC	AACCCCCAGA	ACGCCGCCAG	CGCC	GGACG	350
CCCAACAACC	CGGGGAACCC	ATCCAATCCC	GGCCCCCCC	AGAC	CCCCCGA	400
GAATAGCCTT	ATCGTCACCA	ACCCCAGCGG	CACCCAGACC	AATT	CAGCTA	450
AGACTGCCAG	GAAACCCGAC	CACACCACAG	TGGACATCCC	CCCAGC	CTGC	500
CCACCCCCCC	TCAACCACAC	CGTCGTACAA	Ggtgagaccc	tctgtctca		550
catca	ctggggac	ctt	ggcg	tctgg	agccagaggt	590

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Submission no : 19
Intron 20 : <..75
Exon 21 : 76..217
Intron 21 : 218..>

ggagtagtacacc	gaggagttcc	cagagacttg	tggaaattg	tggagggagc	50
cctgtgttgg	ttcttgtccc	aacagTGAAC	AAAAACGCCA	ACCCAGACCC	100
ACTGCCAAAA	AAAGAGGAAG	AGAAGAAGGA	GGAGGAGGAA	GAAGACGACC	150
GTGGGGAAGA	CGGCCCTAAG	CCAATGCCTC	SCTATAGCTC	CATGTTCATC	200
CTGTCCACGA	CCAACCCgtg	agtatggccc	ccgagcagag	ggcagggggg	250
gctgggtctc	ccaccagggt	ggcggaaannn	nnnnnnnnnn	nnnnnnnnctc	300
ccaccagggt	ggcggaaagtc	aggccagatt	agagggcaat		340

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Submission no : 20
Intron 21 : <..97
Exon 22 : 98..227
Intron 22 : 228..>

gatctcagta	gtggtaggta	acatgagatt	atggaagaaa	agggtttgtg	50
agcctgtgg	ctgagtgac	ctctgcacgc	ccatctgtct	ccaacagCCT	100
TCGCCGCCTG	TGCCATTACA	TCCTGAACCT	GCGCTACTTT	GAGATGTGCA	150
TCCTCATGGT	CATTGCCATG	AGCAGCATCG	CCCTGGCCGC	CGAGGACCCT	200
GTGCAGCCC	ACGCACCTCG	GAACAAACgtg	agtccccacag	agcacacccc	250
ttccctagcct	ggctgctctg	cctcaggcca	ctttctcttg	catccaaaat	300
gctcataggt	agggtgggat	gttggggatca	cccctaggca	tagcccttat	350
ggctgctgg	tgagagggga	agctctgatt	cttggggat	gctcttggga	400
gcaagacatt	ctttgggca	gttctctgt	gagcctggtg	gggtggaggt	450
ggcccagagt	gactggggct	gaaaatt			477

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Submission no : 21
Intron 22 : <..33
Exon 23 : 34..93
Intron 23 : 94..>

gatccactgc tctcttgcctt ttatccctta cagGTGCTGC GATACTTTGA 50
CTACGTTTTT ACAGGCGTCT TTACCTTTGA GATGGTGATC AAGgtgagtg 100
cagattataa gtgagaacac acggtaattt ttttttttaa gcaagtgcag 150
ggctgggcac agtggattc 168

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Submission no : 22
Intron 23 : <..232
Exon 24 : 233..339
Intron 24 : 340..>

gatctaagag	ccggcaagcc	agagctggct	tccatcaggc	aaaggggggc	50
cgcctcatgg	ggcaggggct	ccccactcct	ccctgggagt	cctctggcca	100
ctgcccaccc	ctgcaagatg	agggtggctc	attggcttcc	ctgectctcc	150
ccgagaggct	agagagttgg	tggcagcacc	ccagggtggg	gatcaggtgg	200
gggttcttag	caccctctt	tctcccccac	agATGATTGA	CCTGGGGCTC	250
GTCCTGCATC	AGGGTGCCTA	CTTCCGTGAC	CTCTGGAATA	TTCTCGACTT	300
CATAGTGGTC	AGTGGGGCCC	TGGTAGCCTT	TGCCTTCACg	taagtcttt	350
cgcaagggtt	tcctcttg				368

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Submission no : 23
Intron 25 : <..244
Exon 25 : 245..344
Intron 24 : 345..>

gatcttaacc ccaagacact tcatctaaag gaaaaactgc cataatacac	50
agattatttt aggtcagtc actttactgc catctgtgg gaagttgtaa	100
taatacaaat atccatacac gatggctagg atgttatacg caccccttt	150
aatgtgttgt ccttgagcag tgtacaacct gctcagctgt acatgataac	200
cctgacagtc ccccccaccc caccccaacca tctcccaatc tcacCTTGAG	250
CTTTGGCAGC CGCTTGATGG TTTTAAGAGG TCGTAGCACC CGGAGGACTC	300
GGAGGGATT AATCGTGTG ATGTCTTTTC CTTTGCTATT GCCActgtgg	350
aggaatgttt aggtggaaag aagggaaagag aggaagcaga ggtcagggttg	400
ggtagggggc agcccacacgc tccatggac cctacccttc ccaggcctag	450
aagtctgggg tgagcttgc acaagcctgc cctttctgg tgaagagtg	500
tccattttac cctgt	515

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Submission no : 24
Intron 25 : <..67
Exon 26 : 68..228
Intron 26 : 229..>

ggccactgga	ggcagaaggt	tggcaggtcc	ccagccccctc	atgctctctg	50
tcaactccac	cccacagGCT	GTGTTGACT	GTGTGGTGAA	CTCACTTAAA	100
AACGTCTTCA	ACATCCTCAT	CGTCTACATG	CTATTCATGT	TCATCTTCGC	150
CGTGGTGGCT	GTGCAGCTCT	TCAAGGGGAA	ATTCTTCCAC	TGCACTGACG	200
AGTCCAAAGA	GTGGAGAAA	GATTGTCGgt	gggtctccgc	tttccagcac	250
atccccattg	gaaccagcag	gtgggcaggg	gggaagtggc	tagaggcatt	300
ggccacttgg	gctcagagac	tggagaagtg	atgagccctg	gaagtgactc	350
agttgcaacc	agcttggatc	aaggtagaa	agaaaaccgg	ttttagaatt	400
tgagtc					406

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Submission no : 25
Intron 27 : <..177
Exon 27 : 178..315
Intron 26 : 316..>
Remark : reversed direction!

gatctcaaac	tcctggccctc	aagtataca	tctgccttgg	cctcctaaag	50
tgttgggatt	acaggcgtga	gcaccatgcc	cggcctccaa	gacctttctt	100
attgctaagc	ttcaggccc	tttacccctcc	tgctccccag	ggctccctccct	150
ggatagattt	ccagtcgggc	cacttacTGT	GGCCAGCCTT	CTCCCGTGGAA	200
CACGGTGAAG	AGGGTCAGCA	GAGCCCACAG	CACATTGTCG	TAATGGAATT	250
CATACTTCTT	CCACTCCCAG	TCTCGCGCCT	TCACCTCATT	CTTCTCGTAG	300
AGGAGGTATT	TGCCTctgcc	acagagagtg	gggactgtta	gttaatggga	350
aagaggggct	gtcttgact	tgtctttggt	tatcagagac	agggggaggg	400
aaaggaagag	tggtccacca	nccttagactg	cttggaaagc	agtgacttcc	450
catccgtcca	ccatgtgttc	ctgtgttca	tagggatgn	cgtgtgcaat	500
ctactttta	ggataa				516

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Submission no : 26
Intron 27 : <..84
Exon 28 : 85..276
Intron 28 : 277..>

accttcctca	tcacccttgg	gtccctgtct	ctctcccttcc	tgcccccttcc	50
ctctccctgc	cccattcctt	gcagGGTCCT	CAAGCATTG	GTGGACGCCA	100
CCTTTGAGAA	CCAGGGCCCC	AGCCCCGGGT	ACCGCATGGA	GATGTCCATT	150
TTCTACGTCG	TCTACTTTGT	GGTGTTCCCC	TTCTTCTTTG	TCAATATCTT	200
TGTGGCCTTG	ATCATCATCA	CCTTCCAGGA	GCAAGGGGAC	AAGATGATGG	250
AGGAATACAG	CCTGGAGAAA	AATGAGgtgc	cacttccaat	tccatctgtc	300
ctttaaaaac	tggggacaca	cacaaacttt	aaaacacaca	caacacccaa	350
gaacccttt	ctaggggtac	ctgggggagg	gaacagaagc	attgtcccaa	400
ccgaatccag	tcttcagggc	agcccttcat	ggagttcag	aggaaaacaca	450
tcataatagtg	tatgtatccag	tcagttttaga	ctaggttat		489

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Submission no : 27
Intron 28 : <..253
Exon 29 : 254..418
Intron 29 : 419..>

tagccccatgc aanaatgggg aaatgncagt gcaagtttg gcagttgnng	50
acatctcaag caactgtanc ttgtggata agaaagcaat ggtgagaagg	100
aanagaganc ccaggaatcc tggctggggg caananaggc agagactcaa	150
gcagaagcac ttgagaacccg cgacgagttt gacagagggt gcccgggtgt	200
cagccacccctt cctcctgcct ctgcccgtct caccactggc ctctctcccg	250 50
cagAGGGCCT GCATTGATTG CGCCATCAGT GCCAAGCCGC TGACCCGACA	300
CATGCCGCAG AACAAAGCAGA GCTTCCAGTA CCGCATGTGG CAGTTCGTGG	350
TGTCTCCGCC TTTCGAGTAC ACGATCATGG CCATGATCGC CCTCAACACC	400
ATCGTGCTTA TGATGAAAGgt aagtgcggcc caccagcccc cagcaactant	450
taaccccccac ctgcgttccctg cctctaccct gataaaatga aaccatggc	500
agatttccca ga	512

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Submission no : 28
Intron 29 : 156
Exon 30 : 157..267
Intron 30 : 268..>

gggtctttcc tgaactgtgc ctcctaccag tgaggttgct cagaccttgc	50
ctggggctgg agtgttgccct ggagaacagc catgaagctg acctccccac	100
ttccccacttc ccacccctgc tcgctgaccc ctgctactcc tgccttttc	150
cccttagTTCT ATGGGGCTTC TGTGGCTTAT GAAAATGCC TGCGGGTGT	200
CAACATCGCC TTCACCTCCC TCTTCTCTCT GGAATGTGTG CTGAAAGCCA	250
TGGCTTTGG GATTCTGgt agtaccacct tggggctaca gctatgggct	300
tggrranaanc ccaaggggga acaatgggtc ctggatgatg gtctcccaac	350
gtggccccaac gaaccccaac ctcaagggtg gcttcagttat cctgcccagt	400
ggccacagat c	411

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Submission no : 29
Intron 30 : <..115
Exon 31 : 116..199
Intron 31 : 200..>

ctgtcccgaa	cactccgctg	atggcaact	gtgcctctaa	catgcaccgg	50
ccagcctagg	gggcccggaa	ccaaagccctc	tgttggcattc	tctgtcttgt	100
gggtccccat	tcttagAATT	TTTCCGCAT	GCCTGGAACA	TCTTCGACTT	150
TGTGACTGTT	CTGGGCAGCA	TCACCGATAT	CCTCGTGA	GAGTTTGGG	200
taagtctccc	tccagcttct	ctctgggtga	ctctgggctg	gacgaggca	250
gccccccgggg	gcggggggagc	ggtccccagag	gcagtgtgtc	ccggaaagcca	300
tagctgcttg	agccagca	tggccatgac	cagagaggga	gaactggggc	350
ccccgggaca	agggcagccc	ctcaggaggg	cattgtgggg	agatgggggt	400
aacaaagctt	ggctgttaggg				420

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Submission no : 30
Intron 31 : <..148
Exon 32 : 149..265
Intron 32 : 266..>

ttaatagtgc tttctctctc cctccttatt tggggctctgg cttgcttttt	50
tcctgttggt tggcttcatg taggggcctc tggagtggt gacagctcg	100
agcctttggg gtgggtggat ggtcacccct cttcctccat ctcggcagAA	150
TAACCTTCATC AACCTGAGCT TTCTCCGCCT CTTCCGAGCT GCCCGGCTCA	200
TCAAACCTCT CCGTCAGGGT TACACCATCC GCATTCTTCT CTGGACCTTT	250
GTGCAGTCCT TCAAGgtgag tcctcgcccc tgctgctggc ccaggggctg	300
agaagacagg tgaccctcat gctctggctg aatgtagaag tc	342

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Submission no : 31
Intron 32 : <..156
Exon 33 : 157..222
Intron 33 : 223..394
Exon 34 : 395..509
Intron 34 : 510..>

ccccccaagaa	aatgccccac	caagccctgg	aaggactctg	gcacgtggca	50
tatgyccacc	caacccagtg	gggcagagca	ctgggacaag	ggaggaagac	100
tgcagtgcgg	ctgaggggacc	cccagcactc	ttcttcattg	ccctttttcc	150
caccaagGCC	TGCCTTATGT	CTGTCTGCTG	ATGCCATGC	TCTTCTTCAT	200
CTATGCCATC	ATTGGGATGC	AGgtgagtgt	cgtgtcccta	aggttcccaag	250
agcctccaa	ggagggcagc	cacccttaga	aagggggtggg	tcaagaggagc	300
ctggttcaca	gaagcagcca	tggaggttga	gctgggttcc	ccagaagcca	350
ctggaggaat	ggcagccct	ggtcgtcacc	cwmcaattcc	acagGTGTTT	400
GGTAACATTG	GCATCGACGT	GGAGGGACGAG	GACAGTGATG	AAGATGAGTT	450
CCAAATCACT	GAGCACAATA	ACTTCCGGAC	CTTCTTCCAG	GCCCTCATGC	500
TCTCTTCCGg	tcaagaagggg	acctgtctg	ataatnctgt	ttccgtgggg	550
	tggggtgcc				559

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Submission no : 32
Intron 34 : <..94
Exon 35 : 95..245
Intron 35 : 246..>
Sequence : 316

tcagagccat	gctcaactgtg	tgctccactc	ctgaggaggc	gttggtacca	50
gtcaaggcgt	ggtgtccgag	tctctgattt	ctccctgtcc	tcagGAGTGC	100
CACCGGGGAA	GCTTGGCACA	ACATCATGCT	TTCCTGCCTC	AGCGGGAAAC	150
CGTGTGATAA	GAACCTCTGGC	ATCCTGACTC	GAGAGTGTGG	CAATGAATT	200
GCTTATTTTT	ACTTTGTTTC	CTTCATCTTC	CTCTGCTCGT	TTCTGgtgag	250
tctgtggaca	ctgtgagggc	cgtctggct	ccctaagcct	ggtttcctt	300
caggaggtgg	ttctgt				316

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Submission no : 33
Intron 35 : <..211
Exon 36 : 212..339
Intron 36 : 340..>

gtgttagtgag aactcacctc tccattcccc agtctcttgc	50
tcatttctt tccccatctt ctctctatcc ctctctccat ctggggcctc	100
tgtgtctgtc tttgggtctg tctgtccgtc tgactgtctg tattccttctc	150
acttcactca ttcatccct cggtctctgc cccattctctt ctgggtcccg	200
ggtccccaca gATGCTGAAT CTCTTGTGCG CCGTCATCAT GGACAACTTT	250
GAGTACCTCA CCCGAGACTC CTCCATCCTG G3CCCCCACC ACCTGGATGA	300
GTACGTGCGT GTCTGGGCCG AGTATGACCC CGCAGCTTGg taagaagtca	350
ccccgaatcc tccagccaca atactcacct ctccctggaa ctggaacacg	400
ggcttaggcta ggnccccaga ctctggagca ctgaactcct ggggctccct	450
gcaggggtct cacaggttca gtcaggagag aagatataag aatcatcacc	500
cttgcatacc ccagattaaa cacgtagggt gccaacctgc ccaaaccctg	550
gaggacttgc tggaaatga ggagggcgtc aaccatgaga tgtctgaaga	600
gccctctccct cctacgagtc tctctgtct ctcaactgtga agtctccaga	650
tggtaggat cgattagcca ggctccagga gaaaccaaca gact	694

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Submission no : 34
Intron 36 : <..213
Exon 37 : 214..310
Intron 37 : 311..>

aagggaggtg	cctgcagtcc	cgaactcgac	tgacatccta	cacccctggg	50
tctccccagt	gtctggaaat	gtactggaa	ttcaactgtc	cccaagtctct	100
cccactcctt	gaagccaggg	acaccccagc	ctcgggcata	atgacccctgt	150
tgtgtgcccc	gggagcccg	gtgaacccat	tgcctgcact	aacccccc	200
cttcctcctt	cagCGGTCGG	ATTCAATTATA	AGGATATGTA	CAGTTTATT	250
CGAGTAATAT	CTCCCCCTCT	CGGCTTAGGC	AAGAAATGTC	CTCATAGGGT	300
TGCTTGCAAG	gtttgacttc	cactaaaacc	tgctagcatc	catggaatga	350
gtgtggcttg	gggttcttca	atatatatat	ttcatatata	tatatatata	400
tatctctctc	tctctaaaaa	aacagagcca	tctcttttc	ttgcattaaa	450
ctagaaaaact	cttttagcca	acag			474

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Submission no : 35
Intron 37 : <..82
Exon 38 : 83..188
Intron 38 : 189..>

cctggtagg	ggcgggcgcg	gctcacggga	gacccaggag	ggatgcctgg	50
aatgactgc	gcttgccttg	ggttttctgt	agCGGCTTCT	GCGGATGGAC	100
CTGCCCGTCG	CAGATGACAA	CACCGTCCAC	TTCAATTCCA	CCCTCATGGC	150
TCTGATCCGC	ACAGCCCTGG	ACATCAAGAT	TGCCAAGGgt	aaggaaaggga	200
caggggcggg	cacagacagg	cgtgacaggg	tggaactggg	gatctcctcc	250
ctaccccaa	ctagaggatc	tgctgtcacc	acccggatct	tcattcactc	300
ttccattcat	tcgttccaca	ggnnnttttg	gnnnttggnn	ntttggtgtt	350
ttttttttt	tttgagaca	gagtcttgct	ctgttgccca	ggcagcagtq	400
cggtgacatg	atc				413

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Submission no : 36
Intron 38 : <..96
Exon 39 : 97..204
Intron 39 : 205..369
Exon 40 : 370..470
Intron 40 : 471..>

gggtctcgtt	ctcgggagcc	tatggctttg	cagctgaccc	agagtccagc	50
tgacacccag	gcaggcagtc	agggtctgtc	tacacccca	ttgcagGAGG	100
AGCCGACAAA	CAGCAGATGG	ACGCTGAGCT	CGGGAAGGAG	ATGATGGCGA	150
TTTGGCCCAA	TCTGTCCCAG	AAGACGCTAG	ACCTGCTGGT	CACACCTCAC	200
AAGTgtaaag	gctgagccca	gccttggat	ccaatccacc	aggacagatg	250
gag_	gggagg	gaaaggggag	gccttgggag	agtgttggct	300
acacaggac	ccaggacaag	gtccccaaag	angcctgccc	tttgtgagct	350
caccgtgtgt	gtcccccaagC	CACGGACCTC	ACCGTGAAA	AGATCTACGC	400
AGCCATGATG	ATCATGGAGT	ACTACCGGCA	GAGCAAAGGCC	AAGAAGCTGC	450
AGGCCATGCG	CGAGGAGCAG	gtgcgtgtt	cgccgccttg	gggacatctg	500
ggctggggac	agtggcttgc	atgtcaccac	gggaaccaac	tgaaatatga	550
gggtggctga	gccccagggc	aggccctga	aaagttagggg	ctggtgacaca	600
gcagctcaca	cctgcaatct	cagtgttttq	agaggg		636

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Submission no : 37
Intron 40 : <..407
Exon 41 : 408..517
Intron 41 : 518..625
Exon 42 : 626..764
Intron 42 : 765..>
Sequence : 829

gatcttcagg	gccatggag	ctgcaggaag	gactctggct	ttttccccaa	50
gcaagtggga	gccatggagg	gttctaagca	aaggaggat	aggacctgac	100
tcaagtgtc	atggcgccc	tctgggtggct	cttgtggAAC	agtgggggttG	150
aaggtaggag	cgggagacct	gggagaaggt	gcctgcagtG	agagatgagg	200
acgcgggacc	aggctggggc	tatgacttgg	gtggaggagt	gagaagtgg	250
ccagttctgc	gtggaattgg	aagggtctag	atggatgaga	cctgagagag	300
tgtgtgtgtg	tgtgtgtgtg	tatactgggg	atgtcgcaat	gccttctggg	350
taccaccgtc	caccacccca	cccttgcaca	cacactgtc	tctgccccat	400
tccccagGAC	CGGACACCCC	TCATGTTCCA	GCGCATGGAG	CCCCCGTCCC	450
CAACCGCAGGA	AGGGGGACCT	GGCCAGAACG	CCCTCCCCTC	CACCCAGCTG	500
GACCCAGGAG	GAGCCCTgtg	agtgtcaccc	ctgcccaggga	gttggagtgt	550
gggggtgcgg	tggtccccac	gttctggaaag	ctgcccAACG	gcccactgt	600
accccccggcct	ctgtccccca	tgcagGATGG	CTCACGAAAG	CGGCCTCAAG	650
GAGAGCCCCT	CCTGGGTGAC	CCAGCGTGCC	CAGGAGATGT	TCCAGAACGAC	700
GGGCACATGG	AGTCCGGAAC	AAAGGCCCCCC	TACCGACATG	CCCAACAGCC	750
AGCCTAACTC	TCAGgtgcct	ctgtccccca	actccccaaat	ggctcccagg	800
gccccgggtgg	ttgcgggtgga	aggAACCAT			829

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Submission no : 38
Intron 42 : <..219
Exon 43 : 220..333
Intron 43 : 334..>

tcactgcaac	ctccacccccc	cagtctcaag	tgattccccc	tgccctcagcc	50
tcccaagtca	ctggattaca	ggcgccccacc	accatgtca	ggtatttttt	100
tttgtatttt	tagtagagac	ggggtttcac	aatgttggtc	aggctggct	150
cgaactgctg	ccattgtga	tctggaggtc	aggccccaga	gctcatctgg	200
cttgcatt	cgtccgcagT	CCGTGGAGAT	GCGAGAGATG	GGCAGAGATG	250
GCTACTCCGA	CAGCGAGCAC	TACCTCCCCA	TGGAAGGCCA	GGGCCGGGCT	300
GCCTCCATGC	CCCGCCTCCC	TGCAGAGAAC	CAGgtgggg	ctttcaccac	350
tgcctgggg	ctggaccct	cactctgcac	tgggttaggc	caggcccccc	400
cacaaggcagc	ccagtgcac	ccctctgc	ggactcaggc	ctgggttaggg	450
actcccttcag	tctctgaagc	atctgcagg	ccccacccac	cacccgggtca	500
cacctggagc	acctgcagac	cctctccct	cacagaggac	agagaggaaa	550
gtgtcccccc	tggggtagag	ggcagtggcc	actgcaaaaat	gttctctggc	600
tgcctgggt	ggaggctgca	gacagggggag	gttgtgaar	atttgggt	650
gcagcagggt	tcaacaggc	cagctgagac	ctgcccacgaa	gawcccttga	700
ggccaggagt	ttgagaccag	gttgggcaac	atagaaaaac	cctgtcttt	750
ttttttttt	gagacggagt	ttcactttt	ttgccccagg	ctggagtgtac	800
a					801

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Submission no : 39
Intron 43 : <..83
Exon 44 : 84..119
Intron 44 : 120..>
Sequence : 329

cctccctca	tttccctttt	gcctttat	ttat	tttctgttt	50
tttctgtgtg	caccatccat	ggggctgtga	cagAGGAGAA	GGGGCCGGCC	100
ACGTGGAAAT	AACCTCAGTg	tatgtacggc	ctgcccaggg	cccagcaggc	150
tccggggccc	tcttcctccc	caccccnct	ccagggagtc	ccgtaatctc	200
taccgggtccc	cggaccccac	ccttctttt	gcaatcgac	cctctccct	250
ccatggagcc	caatccttgt	gtgtgggtgc	ctgtgtgtgc	cctgacccat	300
aaggcctggtg	gggcggccat	ccccatcct			329

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Submission no : 40
Intron 44 : <..166
Exon 45 : 167..353
Intron 45 : 354..>
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gatcaggggg	agccaaggcc	ccatggcata	ccctggccccc	tgccccagga	50
tggtcacacc	gcagtcaccc	aaggccacca	ccaggtgtcc	acaatggggc	100
aggaaggacc	gggaccactt	gtgtctatgt	gctgacccca	gcccacccggc	150
ctgtccctc	ccccagACCA	TCTCAGACAC	CAGCCCCATG	AAGCGTTCAG	200
CCTCCGTGCT	GGGCCCCAAG	GCCCGACGCC	TGGACGATTA	CTCGCTGGAG	250
CGGGTCCCGC	CCGAGGAGAA	CCAGCGGCAC	CACCAGCGGC	GCCGCGACCG	300
CAGCCACCGC	GCCTCTGAGC	GCTCCCTGGG	CCGCTACACC	GATGTGGACA	350
CAGgtggca	gccctgtgg	gctcaggac	aagcagaaca	gaggagagga	400
gaggggagga	gaaggcaggg	cgaggagac	actaaggaag	aagaaaggga	450
gaggcctcca	tggagagggg	acagagcggg	ccaggcagcg	gctgcaggaa	500
cctgggtact	acccctccc	cccaacccac	tgacctgcct	cggttcagg	550
gatc					554

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Submission no : 41
Intron 45 : <..31
Exon 46 : 32..285
Intron 46 : 286..>

ctgtgtgctg	tctgaccctc	accggggcca	gGCTTGGGGA	CAGACCTGAG	50
CATGACCACC	CAATCCGGGG	ACCTGCCGTC	GAAGGAGCGG	GACCAGGAGC	100
GGGGCCGGCC	CAAGGATCGG	AAGCATCGAC	AGCACCACCA	CCACCACAC	150
CACCAACCACC	ATCCCCCGCC	CCCCGACAAG	GACCGCTATG	CCCAGGAACG	200
GCCGGACCAC	GGCCGGGCAC	GGGCTCGGGGA	CCAGCGCTGG	TCCCGCTCGC	250
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Exon 47 : 280..>
Stop codon : 280..282
UTR 3' : 283..>

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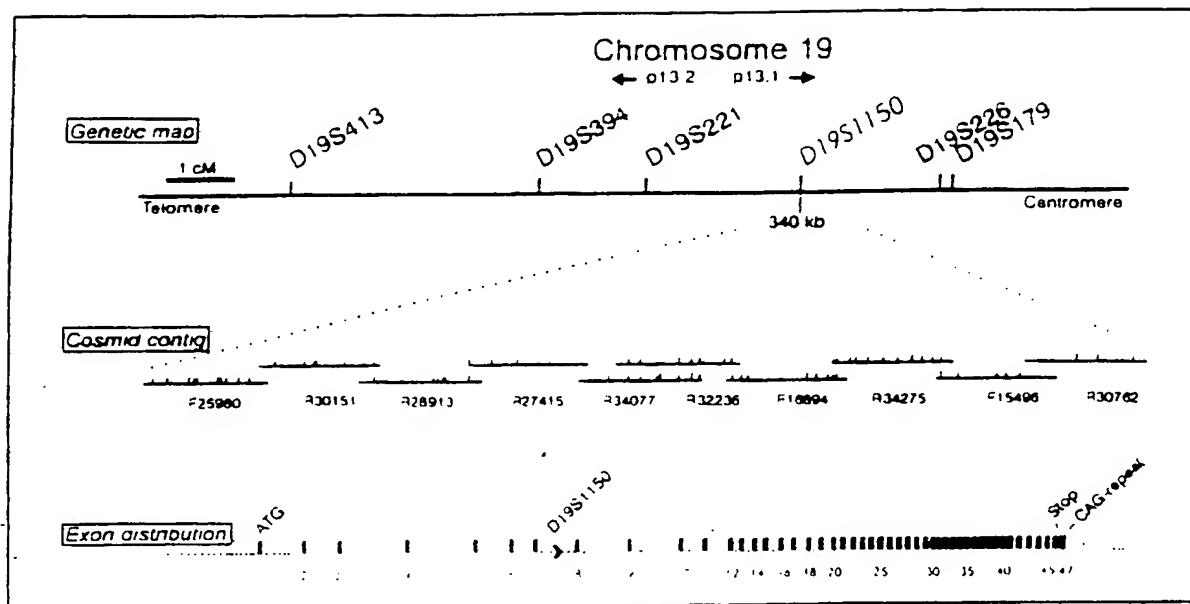


Fig. 2

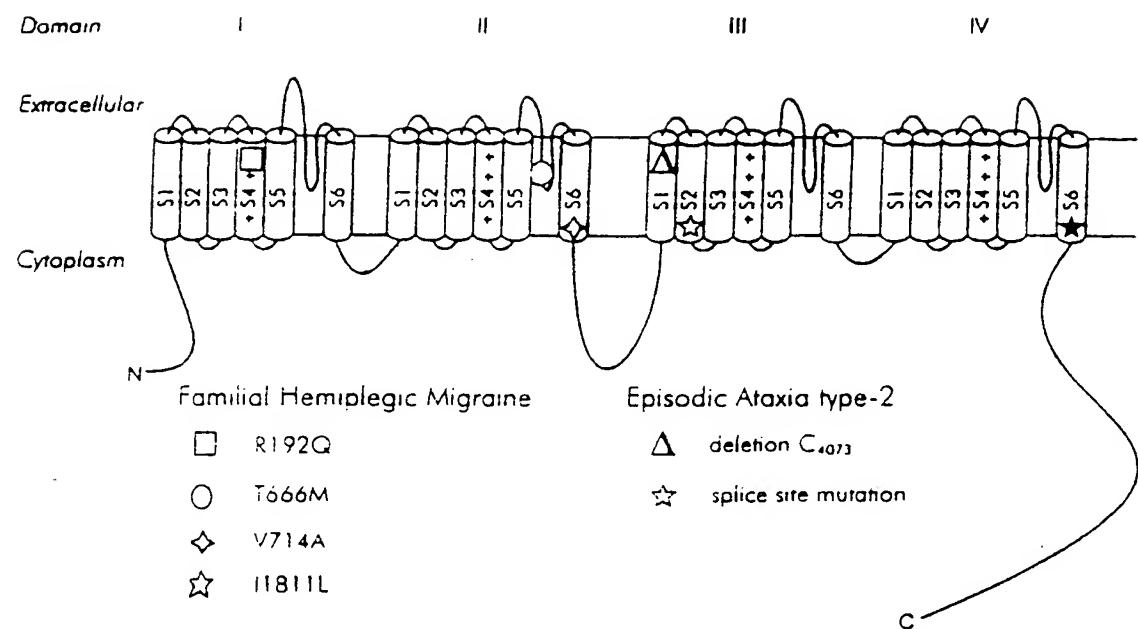


Fig. 3

Figure 4

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Q P G A Q R M Y K Q S M A Q R A R T M A	60
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E Y M I L A T I I A N C I V L A L E Q H	120
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A	H	E	S	G	L	K	E	S	P	S	W	V	T	Q	R	A	Q	E	M	2040
ttccagaagacgggcacatggagtccggacacaaggcccccctaccgcacatgcacacgc																				6180
F	Q	K	T	G	T	W	S	P	E	Q	G	P	P	T	D	M	P	N	S	2060
caggcctaactctcagtcgtggagatgcgcacccatggggccgtccgtggggccgcac																				6240
Q	P	N	S	Q	S	V	E	M	R	E	M	G	R	D	G	Y	S	D	S	2080
gagcactaccccccattggaaaggccaggggccgtccgtggggccgtccgtggggcc																				6300
E	H	Y	L	P	M	E	G	Q	G	R	A	A	S	M	P	R	L	P	A	2100
gagaaccagaggagaagggggccggccacgtgggataaacctcagtagcatccacgcac																				6360
E	N	Q	R	R	R	G	R	P	R	G	N	N	L	S	T	I	S	D	T	2120
agccccatgaagcgatccgtccgtgtggggcccaaggccgcacgcctggacgattac																				6420
S	P	M	K	R	S	A	S	V	L	G	P	K	A	R	R	L	D	D	Y	2140
tcgctggagcgggtcccccggaggagaaccagcggcaccaccgcggccgcgcaccgc																				6480
S	L	E	R	V	P	P	E	E	N	Q	R	H	H	Q	R	R	R	D	R	2160
agccaccgcgcctctgagcgatccgtggggccgtacaccgcgtgtggacacaggctgggg																				6540
S	H	R	A	S	E	R	S	L	G	R	Y	T	D	V	D	T	G	L	G	2180
acagacccgtggaggatgaccacccaaatccggggacccgtccgtcgaaaggagcggggaccaggag																				6600
T	D	L	S	M	T	T	Q	S	G	D	L	P	S	K	E	R	D	Q	E	2220
cggggccggcccaaggatcggaaggcatcgaccacaccaccaccaccaccaccac																				6660
R	G	R	P	K	D	R	K	H	R	Q	H	H	H	H	H	H	H	H	H	2240
catccccccggggccgacaaggaccgcgtatgcccaggaaacggccggaccacggccggca																				6720
H	P	P	P	D	K	D	R	Y	A	Q	E	R	P	D	H	G	R	A		2260
cgggctcgggaccagcgcgtggccgtccgcggcggaggccgagagcgcacatggcgcac																				6780
R	A	R	D	Q	R	W	S	R	S	P	S	E	G	R	E	H	M	A	'H	2280
cgccatcgat																				6786
R	Q	*																		2282